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ABSTRACT

This handbook for literacy tutors and adult education instructors is a compilation of information about various handicapping conditions and suggestions for working with students with each of the handicaps. Seven handicapping conditions are considered: hearing acuity problems, visual impairments, deaf blindness, speech and language impairments, learning disabilities, orthopedic impairments, and epilepsy. Information on each condition is followed by teaching suggestions and recommendations specific to that handicap. A directory of resource organizations and services and a brief bibliography conclude the handbook. (YLB)

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Adult Basic Education
and
General Educational Development Programs
For Disabled Adults

A Handbook for Literacy Tutors and Instructors

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Library for the Blind and Physically Handicapped
Free Library of Philadelphia

Adult Basic Education
and
General Educational Development Programs
For Disabled Adults

A Handbook for Literacy Tutors and Instructors

1988

Library for the Blind and Physically Handicapped
Free Library of Philadelphia
919 Walnut St.
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Adult Basic Education and General Educational Development Programs for Disabled Adults, a Handbook for Literacy Tutors and Instructors is a result of a project funded by the Division of Adult Basic Education, Pennsylvania Department of Education and the U.S. Office of Education. It represents the experiences gained from the teaching of two GED and two ABE classes for disabled adults sponsored by the Library for the Blind and Physically Handicapped, Free Library of Philadelphia.

In October 1987 the Library for the Blind and Physically Handicapped began its second ABE/GED class. The results have been excellent. Twenty print handicapped adults were enrolled in this class. Each of these students formulated an individualized educational plan and maintained attendance and commitment until the program terminated in June. Seven students passed the GED, and four students completed one to four of the five GED tests. All students improved their basic skills. The students readily identify with the teacher, who is herself totally blind. Hiring someone who is handicapped has built in psychological advantages. During the Library's shorter first session of the GED between February and June, 1987, eight out of twelve students received their degrees. To date, 15 handicapped students have received high school equivalency diplomas and 10 have so improved their skills that passage should be completed in 1989.

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1

INTRODUCTION

In the Delaware Valley, over 200,000 individuals between the ages of 16 and 64 have a major disability. They represent 5.5 percent of the population. As a whole, the disabled are significantly less well educated than others of working age. They are more than four times as likely as non-disabled adults to have less than eight years of schooling. In our area, an astonishing 45 percent of the disabled (more than 90,000 individuals) are functionally illiterate.

Many of these undereducated, disabled adults attended school before special education services became as available or as comprehensive as they are today. Consequently, these individuals are in great need of literacy, Adult Basic Education, and even General Educational Development programs. Many of the disabled were thought to have handicaps that impede their participation in regular adult education programs. However, with understanding, support, and instructional modifications, disabled adults can be successfully accommodated in programs in their communities.

This handbook has been prepared for literacy tutors and adult education instructors. It is a compilation of information about various handicapping conditions and suggestions for working with students with each of the handicaps. The information presented comes from a variety of sources written by experts in the field of special education. The handbook has been prepared in the hope that the information and support it provides will challenge adult educators to consider the special needs of all students and to develop and expand their programs to meet these needs to the greatest extent possible. This effort is vital since special programs for the handicapped are not always available. Disabled people are often able to contribute more realistically to the community around them if they improve their thinking and communication skills along with non-disabled adults in mainstream educational situations. Disabled adults who are motivated to work with a tutor or enroll in classes have already surmounted many personal and social barriers in their lives. They are resourceful and can be encouraged to take an active, responsible role in their learning process. While the handbook may seem to focus on the ways in which the disabled are different and the changes that educators must make to accommodate them, we must not lose sight of the fact that disabled students are like others and that all students have a variety of strengths and weaknesses.

Many of the techniques and strategies presented in this handbook can be incorporated into adult education programs to the advantage of all students. When an instructor's focus is on how to help each student learn more effectively, everyone benefits.

2

Hearing Acuity Problems

Impaired hearing presents particular problems in our world because we have such a verbal society. Even individuals with less than a profound hearing loss receive imperfect or incomplete information from the environment. Certain sounds may be missed and voice inflection may be lost, as well as other factors that help one discern whether language is being presented in the form of a question, exclamation, or non-committal responsel. Underdeveloped speech and language is the greatest limitation imposed by hearing impairment. Deficiencies in speech and language particularly hinder an individual's ability to develop skills in language arts areas, such as reading, writing, and spelling. Because a hearing impairment seriously limits the associations between sounds and written symbols, learning to read may be especially difficult for these students. The extent of the difficulty depends upon the student's command of the language, degree of hearing loss, and age at onset.

In addition to academic and communication difficulties, a hearing impaired person may suffer from limitations imposed by society. These limitations may lead to restricted social interactions, poor social adjustment, and negative self image. A number of outside factors, such as motivation, intelligence, social maturity, and family background may influence a hearing impaired person's ability to function. Two individuals with the same measured hearing loss will not necessarily have the same type or degree of difficulty in academic or social settings.

Behaviors That May Indicate a Hearing Impairment

Students with undiagnosed hearing impairments may be incorrectly labeled as mentally retarded, emotionally disturbed, or learning disabled. It is important to consider that a particular student's learning or behavior problem may be the result of a hearing loss. The following are some common behaviors and symptoms that may indicate a hearing impairment.

- ☐ Lack of attention. A student who does not pay attention may not hear what is being said or may hear sounds that are distorted. The student, therefore, tunes out or does not make the effort to attend to what is being said.
- ☐ Difficulty following directions. A student who has little difficulty with written directions and considerable difficulty with oral directions may have a hearing loss.
- ☐ Turning or cocking of head. An unusual amount of cocking the head to one side may indicate a hearing loss. The student may turn one ear toward the speaker to hear more adequately or may make frequent requests for repetitions.
- ☐ Acting out, stubborn, shy, or withdrawn behavior. If a student is unable to hear adequately, personality and behavior problems may arise.

Types of Hearing Loss

There are two major types of hearing impairment, and each is associated with different degrees of loss. Conductive hearing loss affects the loudness or intensity which an individual is able to hear. It is caused by interference with the transmission of sound from the outer ear to the inner ear. The second type is a sensori-neural loss which affects the frequency and clarity of the sounds a person can hear. This loss is caused by damage to the sensory end-organ or a dysfunction of the auditory nerve.

Use of Hearing Aids

There is sometimes confusion regarding the use of hearing aids. A hearing aid may be of help to those with a conductive hearing loss. It can amplify the sounds that are heard, and it can increase the volume of sounds. Conductive losses may also be improved by medical or surgical means.

On the other hand, hearing aids are of limited benefit for people with sensori-neural loss. Hearing loss from nerve damage is usually permanent and irreversible. Even though sound may be amplified by a hearing aid, the damaged nerve will not be able to carry it to the brain. However, a hearing aid may help individuals with nerve-type loss in hearing some sounds more clearly.

It is important to note that a person who is fitted with a hearing aid must make a great deal of adjustment. A hearing aid increases all sounds, not just speech, and the wearer must learn to sort out the important sounds from environmental sounds that are also being amplified.

Suggestions for instructors working with Hearing Impaired Students

1. Arrange seating to the student's best advantage. If possible, the hearing impaired student should sit facing the instructor and also be able to observe the rest of the class. The student will benefit from seeing facial expressions, lip movements and body language.
2. Stand in a part of the room where the light falls on your face.
3. Write on the board and then turn to speak.
4. Speak slowly and distinctly, but not more loudly than normal.
5. Arrange verbal or non-verbal cues to indicate that something important is coming. Be sure to get the attention of the hearing impaired student before giving instructions.
6. Do not interpret fatigue as lack of interest. Hearing impaired students must often expend considerable energy to hear others.
7. Rephrase and restate oral information whenever possible.
8. Furnish carbon and paper to students who take accurate notes to share with the hearing impaired student. The hearing impaired student may not be able to attend to what you are saying and write at the same time. Use a "listener helper" to provide help when needed.
9. Request that other students in the room hold their hands up or stand while talking

so that the hearing impaired student can locate the source of sound quickly.

10. Encourage and facilitate speech-reading and desirable speech habits. Keep in mind the tremendous language handicap that people with hearing losses have.
11. Write assignments on the board so that students can copy them in a notebook.
12. Reinforce prior learning constantly.
13. Ask questions to make certain the hearing impaired student is following the discussion. When presenting a new word or asking a question, repeat it if necessary.
14. When isolated words are presented, such as in spelling, use the words in context. Spelling tests may also be given by providing the sentence on a sheet of paper and replacing the spelling world with a blank space. Many words appear alike on the lips and sound alike.
15. Encourage the hearing impaired student to ask questions or have statements repeated if he/she does not understand. Provide opportunities for the student to interact with others.
16. When presenting new vocabulary words, present multiple meanings if applicable.
17. When referring to an object in the room, it may be helpful to point to it, walk over to it, and touch it. Use gestures, but do not exaggerate them. Keep hands and any object away from your face.
18. Provide a good pattern of speech for the student. Articulating clearly is more helpful than speaking loudly.
19. Encourage the student to participate in oral discussions, and expect him/her to use complete sentences. At the same time, be careful not to nag the student or pressure him/her.
20. Praise and encourage the student when he/she has correctly pronounced a difficult word.
21. Try to briefly discuss topics ahead of their presentation. If possible, provide the student with an outline of the material or a list of key vocabulary. Prereading the assignments may be helpful for the student.
22. In the case of hearing impaired persons who use sign language as a primary communication mode, it may prove necessary to contract for the services of a professional interpreter for the deaf. This professional will put into signs all that the teacher is saying, and thus enable the hearing impaired person to easily be integrated into the classroom.

3

Visual Impairments

The nature of a visual impairment varies according to the type and severity of the eye condition. Visual handicaps may be divided into the following three groups:

- ☐ Those with no useful vision, who receive information through other senses.
- ☐ Those with some useful vision but whose primary means of receiving information is through other senses.
- ☐ Those with impaired vision, who can receive information through visual means.

Visually impaired students who become involved in traditional adult education programs will most likely be limited to the third group described above. These students, whose vision is limited to the extent that they may require educational modifications and adaptations, are classified as partially sighted. The particially sighted are persons whose visual acuity falls between 20/70 and 20/200 on a Snellen Test. This means that the partially sighted are able to see at 20 feet what the normally sighted can see at distances from 70 to 200 feet. It is important to remember, however, that there can be considerable variance in the visual functioning of individuals with the same measured visual acuity. One reason is that measures of distance visual acuity do not provide information regarding near point vision (the ability to see at close distances). Therefore, while two people may have 20/200 measured acuity, one may be able to read print and the other may not. In addition, people with the same measured visual acuity may not be equally efficient in using their remaining vision.

For some people, particularly those with cataracts, it seems the world is viewed through a thick mist. Near objects are hazy, and distant ones may be nearly invisble. Other partially sighted people may see as if they were looking through frosted glass. Objects are recognizable but appear distorted, and fine details are not visible. Some people suffer from double vision, distortions of color, or involuntary eye movements that interfere with focusing and make it tiring to read for long periods.

People with defects or degenerations of the retina (sometimes resulting from diabetes) suffer

from blind spots in parts of their fields of vision. Detachment of the retina causes total or partial black patches. Others, including people with glaucoma and retinitis pigmentosa, may have tunnel vision, as though they were looking through a straw. An individual with macular degeneration loses central vision first, which may interfere with the ability to distinguish print and other fine detail. Most people with this condition retain some peripheral vision.

In general, partially sighted individuals are likely to have difficulty reading. Some may not be able to read quickly or for long periods of time. They may need to get very close to the print or use special optical aids. Those who can only see a few letters or words at a time may have problems with word recognition, comprehension, or spelling. A variety of devices and materials is available to assist the visually impaired and their instructors.

Optical Aids and Special Equipment and Materials

Optical aids are available in many forms. There are various types of reading lenses that can be held in the hand, mounted in holders, or laid on the printed page. Powerful telescopes can be held in the hand or mounted on eyeglasses. Special video equipment that enlarges print is also available. No one aid can serve every purpose, and an invidividual may need a selection of divices for use in different situations.

Talking book machines and tape recorders are of great benefit to the visually impaired. Also, typewriters can be valuable for individuals who have difficulty with handwriting due to their vision problems.

A copier that also enlarges can be an invaluable piece of equipment when working with the visually impaired. If an instructor is so lucky as to have access to such a system, regular instructional materials can be enlarged for use by partially sighted students.

A variety of special materials are available for use with the visually impaired in instructional settings. These include large print books, raised line writing paper, talking calculators, and large print answer sheets. For information regarding all the above aids, please see the Directory at the end of this book for organizations to contact. Although many of the items may be expensive, they may be available on loan, or funding may be provided by one of the social service agencies for the blind.

Environmental Factors

With regard to instructional settings, the primary environmental factor to consider for a partially sighted student is lighting. Good light and freedom from glare and shadows are essential for reading and all close work. This may be accomplished by moving the student closer to the window or light source or by providing additional lighting. Sometimes a shaded reading lamp in combination with adaquate background lighting may be necessary to prevent contrasts in light and shade. It may be beneficial to have the light coming from the side.

Factors That May Indicate a Visual Impairment

The following are some behaviors that may indicate a visual impairment:

- ☐ Rubs eyes excessively.
- ☐ Shuts or covers one eye; tilts head or thrusts it forward.
- ☐ Is sensitive to light.
- ☐ Has difficulty with reading or other work requiring close use of the eyes.
- ☐ Squints, blinks, frowns, or has facial distortions.
- ☐ Holds printed material too close or too far and frequently changes the distance.

- ☐ Complains of pain or aches in the eyes, headaches, dizziness, or nausea following close eye work.
- ☐ Complains of itching, burning or scratchiness in the eyes.
- ☐ Complains of blurred or double vision.
- ☐ Has a tendency to reverse letters, syllables, or words.
- ☐ Has a tendency to confuse letters of similar shape (o and a, c and e, n and m, h and n, f and t).
- ☐ Has a tendency to lose the place in a sentence or page.
- ☐ Uses poor spacing in writing; has difficulty staying on the line.
- ☐ Has a tendency to stumble into things or trip over objects.

In addition to the above behaviors, the following symptoms may indicate a vision problem.

- ☐ Red eyelids
- ☐ Crusts on lids among the lashes.
- ☐ Rucurring sties, sores, or swollen lids.
- ☐ Reddened or inflamed eyes.
- ☐ Crossed eyes or eyes that do not appear to be straight.
- ☐ Pupils of uneven size.
- ☐ Eyes that move excessively or unevenly.
- ☐ Drooping eyelids.
- ☐ Frequent colds and allergies.
- ☐ Tearing.
- ☐ Ticking.

Suggestions for working with Visually Impaired Students.

1. Arrange the partially sighted student's seating for best possible lighting conditions. Do not seat visually handicapped students facing windows. Try to avoid standing or sitting with your back to a bright light source. Writing on a chalkboard where there is considerable glare should also be avoided. Be sure that glare and shadow do not interfere with the student's vision. (Yellow chalk has the highest visibility.)
2. Whenever possible, begin instruction at a concrete level, using manipulatives combined with verbal descriptions. Start with concrete materials or ideas moving to the more abstract as the studenst develops the concept.
3. When appropriate, the visually impaired student should be allowed to experience "doing it", rather than just hearing about a process.
4. At all times, supplement any highly visual material with verbal explanation.
5. Try to unify or integrate new learnings and experiences with formerly mastered skills and concepts.
6. Use a tape recorder to tape lectures, instructions, tests, and assignments.
7. Provide short breaks and vary activities in order to prevent fatigue. For example, a lesson can begin with listening, then proceed to close visual reading, and then to move to motor and tactile activities.
8. It may be necessary to modify testing procedures by extending the amount of time for completion or reducing the number of items.
9. The administration of a test may also have to be modified. For example, you can administer the test orally or tape the test in advance and have the student type the answers. Of course, some students require little or no modifications and would be able to take

tests with other students.

10. Help the student to use residual vision as much as possible. Students who use low-vision or optical aids should be encouraged to do so whenever possible.
11. Visually impaired students should be encouraged to place printed material at whatever distance they find comfortable to read.
12. Use the name of the visually impaired student in discussions when a question is directed to him/her. It is also important for other students to identify themselves by name when addressing or approaching the visually impaired student.
13. Use physical contact such as a pat or touch on the arm to indicate praise or approval.
14. Try to keep the noise level down so the student can hear better.
15. Don't be afraid to use the words "look" and "see" when talking with the student. The student has probably heard these words throughout his/her life, and the words should be part of his/her regular vocabulary.
16. There may be times when the visually limited student needs you to act as a sighted guide. To use the guiding technique, the student should grasp your upper arm, just above the elbow, with the thumb on the outside and the fingers on the inside of your arm. By grasping your arm in that position, the student will be in a position one-half step behind you. By moving your arm behind your body, you alert the student to move directly behind you as you move through narrow openings and doorways.
17. If appropriate, use a buddy system for supportive independence. This also provides a good mutual learning experience.

4

Deaf Blindness

The multiple loss of sight and hearing takes away the two senses through which one communicates with the world. Deaf-blind people's problems with communication and mobility make independent living more difficult to achieve.

The term deaf-blind doesn't necessarily mean total lack of sight or hearing. Some deaf-blind people may have only partial sight or hearing loss. They may be able to understand some speech with the use of a hearing aid, or have enough sight to read large print. However, being deaf-blind does not mean that both senses are impaired, which interferes with the individuals communication abilities in this hearing-sighted world.

There are a variety of causes of deaf-blindness.

- ☐ A major cause is Usher's Syndrome, a genetic disorder causing congenital deafness and progressive blindness due to Retinitis Pigmentosa.
- ☐ As a result of the Rubella epidemic during the mid-sixties, in which pregnant women contracted rubella (German measles), about 6,000 children were born deaf-blind.
- ☐ A hearing-sighted person, or a deaf or blind person, could become deaf-blind at any age due to illness or accident.

There is a difference between those who were born deaf-blind, and those who became deaf-blind later in life. Those who were born deaf-blind need special education and stimulation to aid their experience of the external world. Those who had some life experience before becoming deaf-blind, have had a wide range of experiences as blind, deaf, or hearing-sighted persons. The language skills of those who become deaf-blind later in life are significant. An individual who had hearing long enough to learn to talk can continue to use speech after becoming deaf-blind, although he must learn a new method of receiving communication. The person who is born deaf and becomes blind generally knows sign language and can learn to read it tactually.

There are many devices and communication systems the deaf-blind can use to communicate, depending on the nature of the individual's disability.

- ☐ Use of braille or large print.
- ☐ American Sign language, a visual, gestural language which can be read visually or in the hands.
- ☐ Finger spelling, a manual alphabet where finger configurations represent letters of the alphabet.
- ☐ Print-on-palm, the spelling of words by tracing block letters on another's palm.
- ☐ The CCTV, a closed circuit television which enlarges print.
- ☐ The Optacon, a reading device, which converts the image of a printed letter to a vibrating tactile form which is read with a finger.
- ☐ TDD/TTY, a telephone teletypewriter which is connected to a regular telephone and which allows an individual to communicate with another TDD/TTY by typing a message and receiving a print or braille display.
- ☐ Teletouch, a portable machine that allows one person to type a message on a regular keyboard, while the deaf-blind person receives the message on a braille cell at the back of the device.

Depending on the needs of the individual, it might be necessary to hire an interpreter for a deaf-blind student.

5

Speech And Language Impairments

Most speech problems fall into the following four categories: articulation, stuttering and other fluency problems, language, and voice. They usuaslly do not affect educational performance unless an individual's speech presents one or more of the following difficulties: it calls attention to itself; it interferes with communication; and/or it causes the individual to become maladjusted.

Articulation Problems

Articulation problems are the most common speech errors. They involve omissions, substitutions, distortions, or additions of sounds when pronouncing words. Difficulty articulating is common in young children and usually disappears as they mature and become able to produce sounds correctly. However, due to an inability to control the fine muscles required for good speech (sometimes caused by other conditions such as cerebral palsy), poor environmental models, or the lack of appropriate experiences and encouragement, some articulation problems may continue into adulthood.

Fluency Problems

While we all have breaks in the fluency of our speech, severe problems with rhythm, such as stuttering, can seriously interfere with communication. An individual's fluency problems may fluctuate in degree and nature from time to time. Stuttering may disappear for periods of time, or it may vary in how it affects an individual's speech. While there are many theories regarding the causes of these problems and many approaches to dealing with them, no one approach is best for all. The following are some guidelines to follow when working with a student who stutters:

1. Avoid calling attention to stuttering. Let the student finish what he/she is trying to say

and maintain good listening habits, such as eye contact and positive facial expressions.

2. Make a special note of the circumstances (discussion, response to teacher's question, etc.) and times when a student's stutttering seems to be most severe. On the basis of each student's particular pattern, minimize troublesome situations and maximize situations in which the student is most fluent.
3. As much as possible, reduce anxiety over speaking situations. If the student is particularly fearful of being called on to answer a question orally, make it clear that he/she would not be called on unless he/she raised a hand. This strategy saves students with stuttering problems from much anxiety.
4. Encourage speaking when all is going well and immediately minimize demands to communicate when stuttering becomes more pronounced.

Language Impairments

Language impairments include difficulty comprehending, expressing, and making functional use of spoken language. These problems generally involve disorders in auditory reception and/or expressive language. Auditory reception is the ability to receive meaning from spoken language. A problem in this area means that the individual does not receive spoken messages correctly. He/she may not understand what is being said and may frequently ask to have information repeated. Repeating the message and/or using different vocabulary may help the student to process the information.

Expressive skills refer to the ability to produce meaningful verbal language. Individuals with problems in the expressive area can usually process a message correctly, but they have difficulty responding to it verbally. Expressive problems may affect writing, reading, and spelling, as well as speech.

Additional language impairments include problems with semantics (word meanings and relationships), syntax (sequence of words and sentences), morphological systems (word formations), phonological systems (sound families), and higher level language skills. In many cases, language impairments combine with other speech and language problems and can seriously affect a student's academic functioning.

Voice Disorders

Voice disorders fall into a variety of categories and include voices that are too high, too low, too gruff, too soft, too loud, too nasal, etc. While these problems occur infrequently and have little impact on academic performance, they are of concern because they may interfere with interpersonal communications, cause embarrassment, and present adjustment problems.

Suggestions for working with students with speech and language impairments

1. Accept the student. Focus on developing a positive self-concept by emphasizing strong points.
2. Never pressure the student to respond. An environment should be created that stimulates the student to speak and provides opportunities for responses.
3. Provide a variety of language experiences through which the student can experience success.
4. Remember that you are a language and speech model for the student. Speak in simple sentences; speak slowly, clearly, and enthusiastically.
5. Do not expect the student to speak like you. The student should not be expected to repeat every word that you request.
6. Listen attentively and actively to what the student has to say. Do not look away while the student is speaking.

7. If possible, position yourself at the student's eye level when you speak.
8. Reward student efforts to use a word or phrase meaningfully. The students should be encouraged for his efforts. However, do not expect or demand perfection. Talk with the student, giving a chance for him/her to make a contribution, even if it is difficult to understand.
9. When the student says a word incorrectly, do not correct or criticize. Simply say the word, pronouncing it correctly. In this way, an appropriate model is provided. Do not ask for a repetition.
10. Engage in "self-talk" whenever it is appropriate. Talk out loud about what you are doing.
11. Engage in parallel-talk. That is, verbalize what is happening to the student. Utilize words to describe his/her activities. This provides words for the student to think with.
12. Encourage group participation, even if at times it means allowing the student to fill a non-speaking role.
13. Provide a model of acceptance that other students will follow. Demonstrate by actions that speech impairment makes no difference with respect to friendship, or academic status.

In addition to the above, please keep in mind that a speech or language impairment may be the result of an undetected hearing loss. It may be beneficial for the student with speech or language problems to have an audiological examination if he/she has not had one recently.

6

Learning Disabilities

Learning disabilities have been thought to affect only school-age children and to be cured by the time students complete their schooling. However, it is now generally understood that learning disabilities persist into adulthood and may affect an individual in social and employment settings as well as in academic life. The following definition of learning disabilities was developed by the Association for Children and Adults with Learning Disabilities and points out the lifelong impact of the problem along with its effect on non-academic aspescts of life.

> Specific learning disabilities is a chronic condition of presumed neurological origin which selectively interferes with the development, integration, and/or demonstration of verbal and nonverbal abilities.
>
> Specific learning disabilities exist as a distinct handicapping condition in the presence of average to superior intelligence, adequate sensory and motor systems, and adequate learning opportunities. The condition varies in its manifestations and in degree of severity.
>
> Throughout life, the condition can affect self-esteem, education, vocation, socialization, and daily living activities.

While there is no typical profile of a learning disabled student, most exhibit a significant discrepancy between apparant ability to perform in or more areas, and actual level of performance. A learning disabled student is usually someone with average or above-average intelligence whose academic achievement is not consistent with his/her ability. The student's performance may be highly variable, with fluctuations from subject to subject and class to class. He/she may experience difficulty in reading, writing, spelling, mathematics, talking, thinking, and/or listening.

An official diagnosis of learning disability should be the result of a comprehensive evaluation by a specialist. The following is a description of problems in specific learning processes

that a student with a learning disability is likely to encounter. While it is unlikely that one individual would manifest all of these difficulties, they may appear in various combinations and differ in degree. If you are working with a student who you think may have a learning disability, referral to the Office of Vocational Rehabilitation or a community mental health/mental retardation center for an evaluation may be helpful.

Visual Perception

Individuals with visual perception problems may have perfect eyesight but see letters incorrectly or in reverse order. They frequently confuse letters that look alike, such as b and d, and g and q. When reading, they may omit letters, words. or paragraphs, or jumble the spaces between words. Students who cannot discriminate similarities in letters, words, numbers, and geometric forms will experience difficulty and frustration in all aspects of learning. Visual perception problems may also interfere with understanding social cues. This can result in misinterpretation of facial expressions that convey boredom, approval, anger, skepticism, or the end of a conversation or interview.

Auditory Perception

Auditory perception problems interfere with accurate interpretation of information received through the ears. Despite normal hearing, people may have difficulty differentiating between similar sounds (i.e., hear "crashed the car" for "washed the car" or "ninety minutes" for "nineteen minutes"). They may be acutely sensitive to background noises and be unable to screen out traffic, rustling of paper, whispers, or other sounds when listening to an instructor, a conversation, or when trying to concentrate on an activity. Weak auditory perception makes it difficult to master sound/symbol relationships. As a result, many learning disabled students have difficulty developing word attack skills.

Impaired auditory perception can also make it hard to catch the implications of different tones of voice. Inappropriate reactions can occur when a questioning tone of voice is interpreted as an angry voice, or when a joke is taken as a serious comment.

Spatial Perception

Spacial perception difficulties can produce inaccurate signals regarding where one's body is in space. This affects a person's ability to judge distances, differentiate between right and left, and follow directions. People with spatial problems frequently get lost, even in familiar territory.

Memory

Memory difficulties plague many learning disabled students. If impressions received by the senses are to be usable, they must be stored by the brain and retrieved when needed. Learning disabled students are more likely to have problems with short-term memory than with long-term memory. They search endlessly to find words, names, dates, and thoughts that seem lost inside their heads.

Sequencing

Problems with sequencing interfere with understanding the structure of a discussion or a reading passage, or seeing the relationship of main ideas to subordinate ideas. Seeing the correct order of letters in a word or numbers in a column is also difficult. Students who have problems with sequencing information often have difficulty with outlining, performing mathematical operations, choosing priorities, organizing notes, or keping track of important materials or belongings.

Gross and Fine Motor Coordination

Poor coordination of large muscles (gross motor problems) can result in clumsiness, such as knocking things over and bumping into people and objects. For an individual with these problems, participation in many activities, such as sports is often difficult. Poor coordination of small muscles (fine motor problems) can make writing very difficult.

Visual Motor Coordination

Problems with visual motor coordination make it difficult for the hands or feet to obey commands from the eyes, copy words from the blackboard, cut a pattern of a dress, type, or write legibly. Similarly, auditory motor problems interfere with following spoken directions or listening and taking notes at the same time.

Behaviors That May Indicate a Learning Disability

As a result of problems in one or more of the above areas, a learning disabled individual may exhibit several or many of the following behaviors:

- ☐ Demonstrates difficulty in reading, writing, spelling, and/or using numerical concepts with average to superior skills in other areas.
- ☐ Has poor handwriting; prints instead of using script; writes with an inconsistent slant; has difficulty with certain letters; spaces words unevenly.
- ☐ Has trouble listening to a lecture and taking notes at the same time.
- ☐ Is easily distracted by background noise or visual stimulation; is unable to pay attention.
- ☐ May appear to be hurried and anxious in one-in-one meeting.
- ☐ Has trouble understanding or following directions; is easily overwhelmed by multiple directions or over-stimulation; may not understand information the first time it is given and may need to have it repeated.
- ☐ Confuses similar letters such as "b" and "d", "p" and "q"; confuses the order of letters in words, reads was for saw, teh for the; misspells the same word several different ways in the same composition.
- ☐ Confuses similar numbers such as 3 and 8, 6 and 9; changes the sequence of numbers such as 14 and 41; has difficulty copying numbers accurately and working with numbers in columns.
- ☐ Omits or adds words, particularly when reading aloud.
- ☐ Has difficulty sticking to simple schedules; repeatedly forgets things; loses or leaves possessions; generally seems disorganized.
- ☐ Appears clumsy or poorly coordinated.
- ☐ Seems disoriented in space; confuses up and down, right and left; gets lost in buildings; is disoriented when a familiar environment is rearranged.
- ☐ Seems disoriented in time (i.e., is often late to class, unusually early for appointments, or unable to finish assignments in the standard time period).
- ☐ Misinterprets the subtleties in language, tone of voice, or social situations.
- ☐ Displays excessive anxiety, anger, or depression because of the inability to cope with school or social situations.

Suggestions For Working With Learning Disabled Students

Many learning disabled adults have never been diagnosed nor have they had the benefit of appropriate training or assistance. While these individuals may have histories filled with frustrations, failure, and disappointment, it is important to note that with support, effort, and determination, ways can be found to accommodate or compensate for many of the difficulties

they encounter. For many, simply gaining a better understanding of the problem is extremely beneficial. The following are some techniques and strategies that may be useful when working with a learning disabled student. Many of these suggestions can be effectively implemented with all students.

1. Break down tasks into small increments of learning and present them to the student in a paced, sequential manner. Present a variety of short assignments.
2. Make sure the student has acquired one skill before presenting the next skill in the sequence of learning tasks.
3. Structure assignments for the student and provide frequent feedback about the quality and appropriateness of work completed.
4. Provide activities that allow the student to experience small successes in order to enhance his/her self concept.
5. Use as many modalities (sight, hearing, speaking, touch) as possible when presenting material. Making information available through different senses helps students to be active learners and to use their strongest channels to get information.
6. At the same time, try to capatilize on the student's area(s) of strength. For example, if the student is a good listener and can carry out oral directions well, be sure to present materials orally. Teaching through the student's strengths helps to remediate weak areas.
7. Teach new concepts in as concrete a way as possible. It is often easier for learning disabled students to learn the theory after its practical application.
8. Relate new material to everyday live whenever possible. This can make abstract concepts more understandable.
9. Control the complexity of directions. Many learning disabled students benefit from having directions broken down into steps, with one step presented at a time.
10. Review and preview. It is extremely helpful to briefly review major points of the previous session and to highlight main points to be covered that day. If possible, reviews and previews should be outlined in more than one way: written on the board or a flip chart, presented orally, and/or outlined in a handout.
11. Consider a nontraditional grading system with reinforcement for appropriate responses. On a composition, for example, provide two grades: one for content (ideas), the other for grammar and structure.
12. De-emphasize timed tests. Provide additional time for task completion to alleviate pressure.
13. Use a directed-reading approach with all assignments involving reading (social studies, science, etc.). Review new vocabulary. Establish a purpose for reading (e.g., reading to acquire specific information, reading to answer specific questions, etc.). Providing a focus for reading may enhance attention.
14. Limit the teaching of new vocabulary to words used in a specific lesson or exercise. Simple drawings and large print can clarify definitions in handouts.
15. Help the student to visualize material. The more a student can visualize as well as hear what is presented, the better the material will be understood. Visual aids can include overhead projectors, films, slide projectors, chalkboards, flip charts, computer graphics, and illustrations.
16. Use color whenever possible. Visual impact is even sharper in color, and color coding is an aid to learning.
17. Provide opportunities for touching and handling materials that relate to ideas presented. This can strengthen learning.
18. Whenever possible, make announcements in both oral and written forms. This is especial-

ly true of changes in the schedule, assignments, or exams.

19. Speak at an even speed, emphasizing important points. If there are three points, it helps to say, "my first point is . . ." and "now, the second important point".
20. Make eye contact frequently. This is important in maintaining attention and encouraging participation.
21. Encourage learning disabled students to sit in the front of the classroom where they can hear well and have a clear view of the chalkboard.
22. If possible, provide the opportunity to repeat verbally what has been learned as a check for accuracy. This can take place during the lesson or after class.
23. Some learning disabled students are particularly self-conscious about talking in front of groups. Ask these students questions with short answers, or start the answer, trying not to interrupt once the student begins to respond.
24. As with all students, it is especially important to pay attention to self-concept enhancement when working with learning disabled students. Opportunities for student success should be maximized.

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Orthopedic Impairments

Orthopedic impairments generally include diseases and deformities of the muscles, joints, and skelatal system. Many of these impairments do not impact on individuals in instructional settings. However, there are a few that have implications for instructors of students who suffer from the impairment. The most common of these is cerebral palsy.

Cerebral Palsy

Cerebral Palsy is an impairment of the ability to make voluntary movements. It is not a progressive disease, but a condition resulting from damage to the motor control center of the brain. Since there may be varying degrees of brain injury, individuals with cerebral palsy may also have problems with hearing, vision, speech and language, and/or intelligence. However, most have normal intelligence, and many people with the condition, especially those with mild or moderate cases, are able to function quite well in academic and other settings. While instructional modifications may be necessary, they will vary with the individual needs of the student.

In most cases, functions that require motoric responses, such as reading, writing, and speaking, provide the greatest difficulty for students with cerebral palsy. It may be necessary to adapt materials or equipment so the student can participate fully in a lesson or activity.

Multiple Sclerosis

Another impairment that affects motor coordination is multiple sclerosis. Multiple sclerosis is a progressive disease which causes degeneration and failure of the body's neurological system. It results in progressive loss of motor coordination and some senses.

Suggestions For Working With Orthopedically Impaired Students

1. Use tape, rubber bands, or a clipboard to hold writing paper down.
2. Use clay, styrofoam, or golf balls on pencils so they can be held more securely.
3. Book holders and mechanical page turners are available if necessary.
4. Ordinary or adapted typewriters and calculators may be useful for students with writing difficulties. It may be helpful to use a pencil rather than fingers to stike the keys.

8

EPILEPSY

Epilepsy includes a number of neurological conditions referred to as convulsive disorders. It involves the temporary impairment of normal brain functioning. Seizures occur when there are excessive electrical discharges released in some nerve cells in the brain. They sometimes result in muscular convulsions and partial or total loss of consciousness.

Individuals with epilepsy will require little, if any, modification of their instructional programs. However, it may be helpful to become familiar with the following suggestions in the event a student has a seizure during an instructional session.

1. Keep calm when a major seizure occurs. You cannot stop a seizure once it has started. Do not restrain the student or try to revive him/her.
2. Clear the area of hard, sharp, or hot objects that could cause injury. Place a pillow or rolled up coat under the student's head.
3. Do not force anything between the student's teeth. If the moth is open, you may place a soft object like a hankerchief between the teeth on one side of mouth.
4. Turn the student's head to the side and make sure that breathing is not obstructed.
5. Do not be concerned if the student seems to have stopped breathing. However, you should be concerned if the student seems to pass from one seizure into another without gaining consciousnsess. (This is rare, and you should contact a doctor if it occurs.)
6. Carefully observe the student's actions during the seizure for a full medical report later. When the seizure is over, let the student rest.

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DIRECTORY

Adult Education Programs and Referral Services

Mayor's Commission on Literacy
City Hall Annex, Room 702
Philadelphia, PA 19107
215-MU6-8652

School District of Philadelphia
Division of Adult Education
427 Monroe Street
Philadelphia, PA 19147
215-351-7018

Center for Literacy
3723 Chestnut Street
Philadelphia, PA 19104
215-382-3700

Community College of Philadelphia
Center on Disability
1700 Spring Garden Street
Philadelphia, PA 19130
215-751-8050

Drexel University
33rd and Chestnut Streets
Philadelphia, PA 19104
215-895-2472

Eye Institute
Learning Center
1201 W. Spencer Street
Philadelphia, PA 19141
215-276-6050

Jewish Employment
and Vocational Service
A.P. Orleans Center
1330 Rhawn Street
Philadelphia, PA 19111
215-728-4430

Library for the Blind and
Physically Handicapped
919 Walnut Street
Philadelphia, PA 19107
215-925-3213

Pennsylvania School for the Deaf
100 W. School House Lane
Philadelphia, PA 19144
215-951-4700

Temple University
Temple Mile
ABE/GED/CEP
1700 N. Broad Street
Philadelphia, PA 19122
215-787-7602

Pan African Studies, Community Education Program
ABE/GED/CEP
Temple University
Gladfelter Hall, Room 103
12th and Berks Mall
Philadelphia, PA 19122
215-787-1998

Special Equipment and Materials

American Printing House for the Blind
P.O. Box 6085
Louisville KY 40206-0085
502-895-2405

Library for the Blind and Physically Handicapped
919 Walnut Street
Philadelphia, PA 19107
215-925-3213, 1-800-222-1754 (in PA)

PRISE
200 Anderson Road
King of Prussia, PA 19406
215-265-7321

Reader Development Program
Free Library of Philadelphia
Logan Square,
Philadelphia, PA 19103
215-686-5346

General Information

Associated Services for the Blind
919 Walnut Street
Philadelphia, PA 19107
215-627-0600

Association for Children and Adults with Learning Disabilities
4156 Library Road
Pittsburg, PA 15234
412-341-1515

Blindness and Visual Services
1327 Hamilton Street
Philadelphia, PA 19123
215-560-5700

Epilepsy Foundation of Philadelphia
3200 Henry Avenue
Philadelphia, PA 19129
215-842-4560

Greater Philadelphia Branch of the Orton Dyslexia Society
P.O. Box 251
Bryn Mawr, PA 19010

HEATH Resource Center, The National Clearinghouse on Post-Secondary Education for Handicapped Individuals
One Dupont Circle, Suite 670
Washington, D.C. 20036
1-800-54-HEATH

Multiple Sclerosis Society
117 S. 17th Street
Philadelphia, PA 19103
215-936-0100

Office of Vocational Rehabilitation
444 N. 3rd Street
Philadelphia, PA 19123
215-560-1900

United Cerebral Palsy Association of Philadelphia and Vicinity
102 E. Mermaid Lane
Philadelphia, PA 19118
215-242-4200

Deaf-Blind

Betty Broecker
Deaf-Blind Program
Associated Services for the Blind
919 Walnut Street
Philadelphia, PA 19107
215-627-0600 voice or TDD/TTY

Hearing-Vision Impaired Programs
Gallaudet College
Kendall Green
Washington, DC 20002

Helen Keller National Center
111 Middle Neck Road
Sands Point, NY 11050
516-944-8900 (TTY and voice)

National Deaf-Blind Information Center
2930 Turtle Creek Plaza, Suite 102
Dallas, TX 75219

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